

Contract Drawings For

# SOUTHEAST ALASKA WATERSHED COALITION

## CITY OF GUSTAVUS

### GUSTAVUS FISH PASSAGE IMPROVEMENTS PROJECT

#### GRANDPA'S FARM ROAD

SECTION 13, TOWNSHIP 40 SOUTH, RANGE 58 EAST, COPPER RIVER MERIDIAN, ALASKA  
FEBRUARY 2016

| LEGEND   |   |
|----------|---|
| EXISTING | DESCRIPTION                             |
|          | APPROXIMATE RIGHT-OF-WAY                |
|          | CONTROL POINT                           |
|          | ORDINARY HIGH WATER                     |
|          | CULVERT                                 |
|          | EDGE OF PAVEMENT                        |
|          | EDGE OF GRAVEL/SHOULDER                 |
|          | EDGE OF VEGETATION                      |
|          | EXISTING THALWEG                        |
|          | TOP OF BANK                             |
|          | TOE OF SLOPE                            |
|          | APPROXIMATE UNDERGROUND ELECTRICAL LINE |
|          | UNDERGROUND COMMUNICATION               |
|          | ELECTRICAL TRANSFORMER                  |
|          | TELEPHONE PEDESTAL                      |

| ABBREVIATIONS |                                |
|---------------|--------------------------------|
| ALCAP         | ALUMINUM CAP                   |
| AVASP         | AS VERTICAL AS SAFELY POSSIBLE |
| BFW           | BANKFULL WIDTH                 |
| CFS           | CUBIC FEET PER SECOND          |
| CP            | CONTROL POINT                  |
| CSP           | CORRUGATED STEEL PIPE          |
| E             | EASTING                        |
| ELEC          | ELECTRIC                       |
| ELEV          | ELEVATION                      |
| FT            | FEET                           |
| GALV.         | GALVANIZED                     |
| I.E.          | INVERT ELEVATION               |
| IN            | INCH                           |
| ME            | MATCH EXISTING                 |
| MIN           | MINIMUM                        |
| ML            | MILE                           |
| N             | NORTHING                       |
| NTS           | NOT TO SCALE                   |
| OHW           | ORDINARY HIGH WATER            |
| Q             | FLOW                           |
| Q2D2          | 2-YEAR, 2-DAY FLOW             |
| SQ MI         | SQUARE MILE                    |
| STA           | STATION                        |
| TBM           | TEMPORARY BENCH MARK           |
| TYP           | TYPICAL                        |
| VAP           | VERTICAL ADJUSTMENT POTENTIAL  |



VICINITY MAP  
NTS

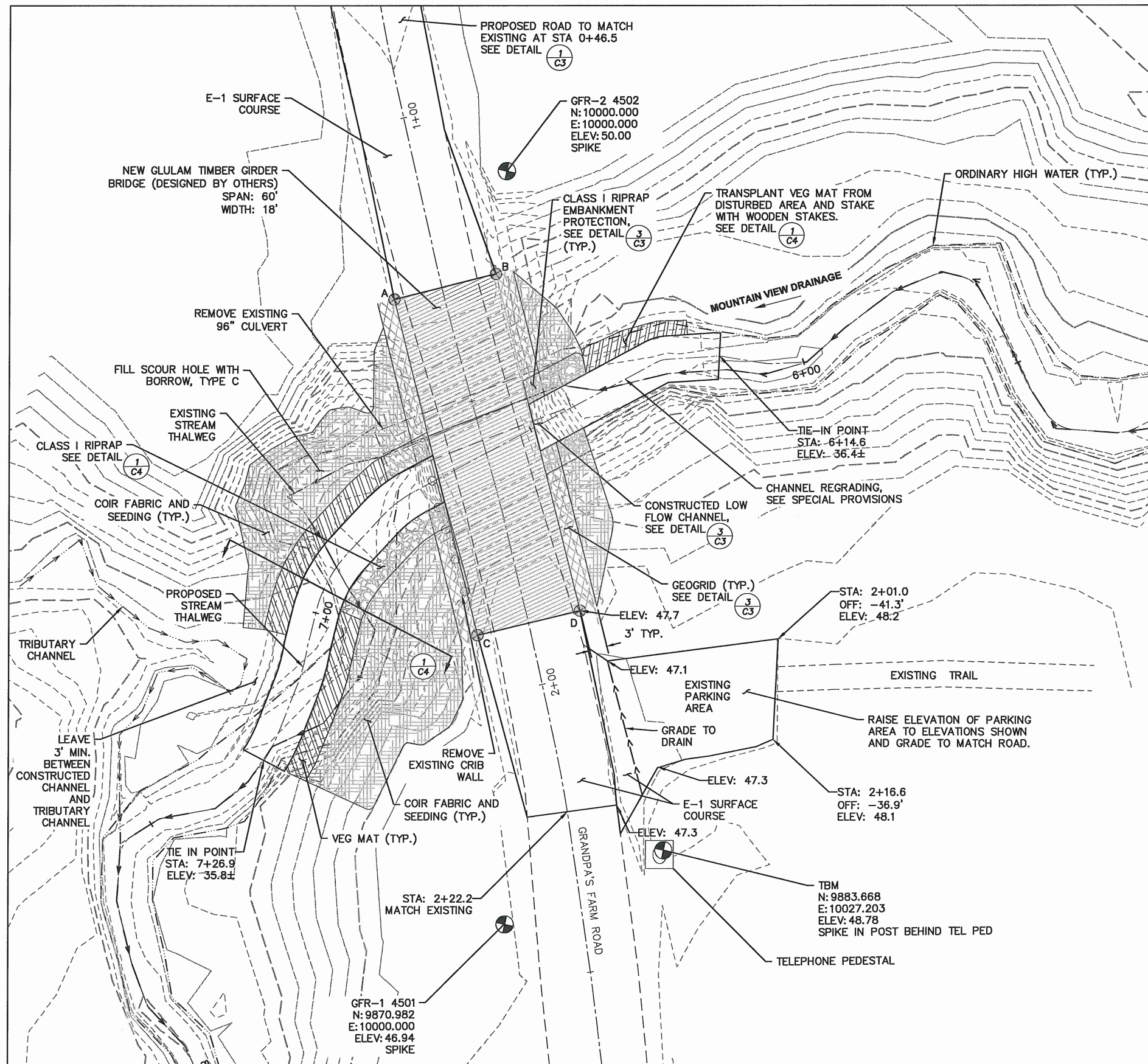
- GENERAL NOTES
1. SURVEY INFORMATION WAS PROVIDED BY DOWL. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL SITE FEATURES. IF THE CONTRACTOR SHOULD ENCOUNTER CONDITIONS OTHER THAN THOSE SHOWN ON THE PLANS, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE.
  2. PLANS MAY NOT SHOW ALL EXISTING UTILITIES ON SITE. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
  3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES AND SHALL EXERCISE CAUTION DURING CONSTRUCTION.
  4. COORDINATE CONSTRUCTION STAGING AND MOBILIZATION AREAS AND ACTIVITIES WITH OWNER'S REPRESENTATIVE.
  5. EXERCISE EXTREME CAUTION AND OBSERVE ALL APPLICABLE OSHA REQUIREMENTS FOR WORKING IN CONFINED AREAS.
  6. STATIONING IS ALONG CENTERLINE OF STREAM OR ROADWAY.
  7. VERIFY ELEVATIONS OF ALL PROPOSED STRUCTURES PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES FROM PLANS IMMEDIATELY TO OWNER'S REPRESENTATIVE.
  8. BRIDGE DESIGN LOAD: AASHTO LOADING HS-20, MINIMUM SOIL BEARING CAPACITY: 4000 PSF.
  9. EXCAVATION AND COMPACTION:
    - A. REMOVE ALL ORGANIC OR OVER SATURATED SOFT MATERIAL, WHICH CANNOT BE COMPACTED.
    - B. EMBANKMENT SHALL BE PLACED AND COMPACTED WITH CARE AND SHALL BE BROUGHT UP EVENLY. MATERIAL TO BE COMPACTED TO 95% MAXIMUM DRY DENSITY.
  10. ALL VEGETATION IN THE AREAS NOT AFFECTED BY WORK SHALL BE PRESERVED AND PROTECTED BY THE CONTRACTOR. RESEED ALL DISTURBED AREAS.

- DRAWING INDEX
- |    |                         |
|----|-------------------------|
| C1 | COVER SHEET             |
| C2 | ROADWAY AND STREAM PLAN |
| C3 | PROFILES AND SECTIONS   |
| C4 | STREAM DETAILS          |

PREPARED BY:



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### ESTIMATE OF QUANTITIES (GRANDPA'S FARM ROAD)

| Item No. | Pay Item  | Pay Unit    | Quantity     |
|----------|---|-------------|--------------|
| 201(3B)  | CLEARING AND GRUBBING   | LUMP SUM    | ALL REQUIRED |
| 202(4)   | REMOVAL OF CULVERT PIPE   | LINEAR FOOT | 33           |
| 203(3)   | UNCLASSIFIED EXCAVATION   | CUBIC YARD  | 412          |
| 203(5C)  | BORROW, TYPE C  | CUBIC YARD  | 246          |
| 203(19)  | STREAM DIVERSION & DEWATERING   | LUMP SUM    | ALL REQUIRED |
| 203(20)  | UTILITY RELOCATION  | LUMP SUM    | ALL REQUIRED |
| 301(4)   | AGGREGATE SURFACE COURSE (E-1)  | CUBIC YARD  | 18           |
| 506(5)   | MODULAR GLULAM TIMBER GIRDER BRIDGE WITH TIMBER DECK (DESIGNED BY OTHERS) | LUMP SUM    | ALL REQUIRED |
| 506(6)   | PREFABRICATED TIMBER SILLS AND BACKWALLS                                  | LUMP SUM    | ALL REQUIRED |
| 506(7)   | SHIPPING  | LUMP SUM    | ALL REQUIRED |
| 506(8)   | ASSEMBLY AND INSTALLATION OF BRIDGE                                       | LUMP SUM    | ALL REQUIRED |
| 611(1)   | RIPRAP, CLASS I   | CUBIC YARD  | 70           |
| 618(4)   | SEEDING   | LUMP SUM    | ALL REQUIRED |
| 619(2)   | MATTING   | SQUARE YARD | 217          |
| 630(1)   | GEOTEXTILE, SEPARATION  | SQUARE YARD | 181          |
| 634(1)   | GEOGRID   | SQUARE YARD | 75           |
| 640(1)   | MOBILIZATION AND DEMOBILIZATION   | LUMP SUM    | ALL REQUIRED |
| 641(1)   | EROSION AND POLLUTION CONTROL ADMINISTRATION                              | LUMP SUM    | ALL REQUIRED |
| 642(1)   | CONSTRUCTION SURVEYING  | LUMP SUM    | ALL REQUIRED |
| 643(2)   | TRAFFIC MAINTENANCE   | LUMP SUM    | ALL REQUIRED |

### BRIDGE COORDINATE TABLE

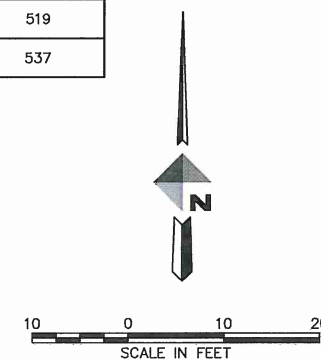
| POINT | NORTHING | EASTING   | DECK ELEVATION | STATION | OFFSET |
|-------|----------|-----------|----------------|---------|--------|
| A     | 9978.000 | 9980.728  | 48.2           | 1+29.88 | 8.44   |
| B     | 9982.393 | 9998.183  | 48.2           | 1+29.74 | -9.56  |
| C     | 9920.504 | 9995.198  | 47.7           | 1+89.23 | 8.92   |
| D     | 9924.680 | 10012.709 | 47.7           | 1+89.22 | -9.08  |

### PERMANENT FILL BELOW OHW

| MATERIAL    | VOL (CY) | AREA (SF) |
|-------------|----------|-----------|
| RIPRAP      | 43       | 837       |
| GEOTEXTILE  | 3        | 837       |
| COIR FABRIC | 2        | 519       |
| BORROW      | 67       | 537       |

NOTE:  
PROPOSED ROAD WIDTH TO TAPER FROM 18' AT BRIDGE TO EXISTING WIDTH AT TIE-IN POINTS.

- UTILITY NOTES:
- UNDERGROUND ELECTRIC LINE AND TELEPHONE LINE PRESENT IN EXISTING GRANDPA'S FARM ROAD EMBANKMENT. REQUEST UTILITY LOCATES PRIOR TO BEGINNING EXCAVATION.
  - EXISTING UNDERGROUND ELECTRIC LINE TO BE RELOCATED. COORDINATE UTILITY RELOCATE WITH CITY OF GUSTAVUS AND ALASKA POWER & TELEPHONE COMPANY.
  - EXISTING UNDERGROUND TELEPHONE LINE TO BE RELOCATED. COORDINATE UTILITY RELOCATE WITH CITY OF GUSTAVUS AND ALASKA COMMUNICATION SYSTEMS.



### CALL BEFORE YOU DIG

The Contractor shall notify all area utility companies prior to commencement of excavation. The following is a partial list:  
AP&T 697-2299  
ACS 563-8000

| Revision No.    | Description | Date     | Designed        |
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|                 |             |          | RDP             |
|                 |             |          | Date            |
|                 |             |          | FEB, 2016       |
| Project Number: |             | File No: | Scale: AS SHOWN |

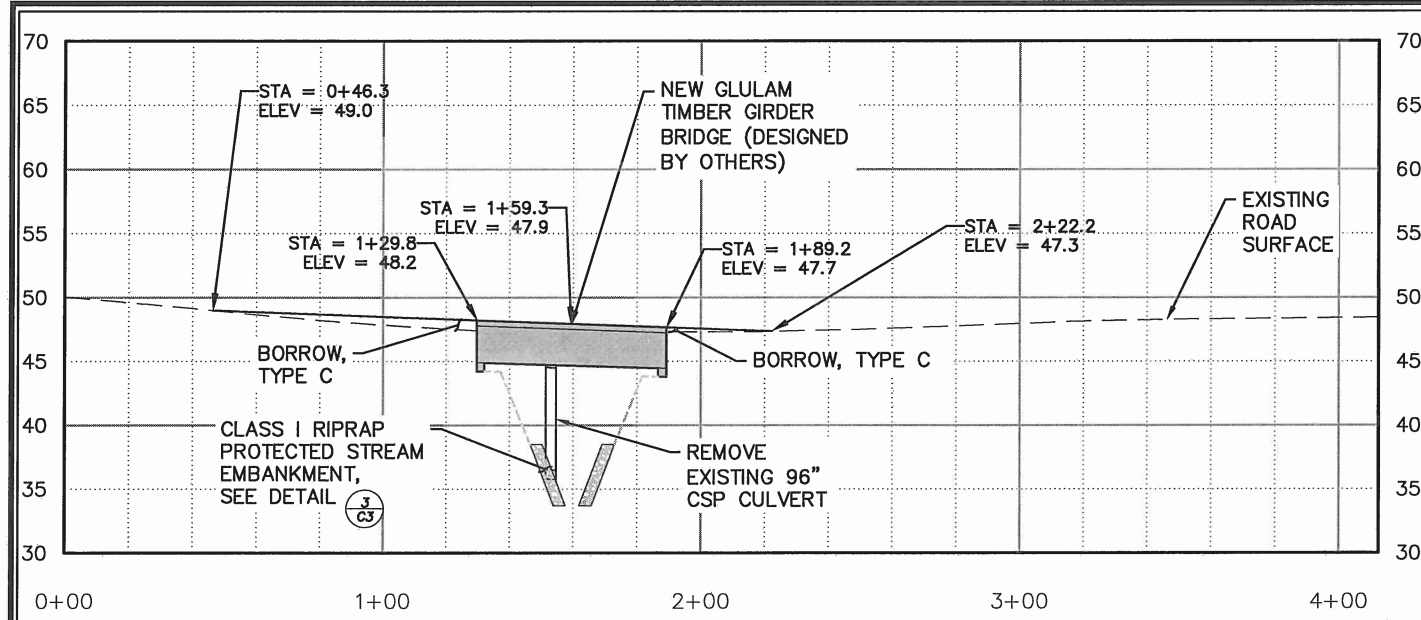


SOUTHEAST ALASKA WATERSHED COALITION  
CITY OF GUSTAVUS  
GUSTAVUS FISH PASSAGE  
IMPROVEMENTS PROJECT  
GRANDPA'S FARM ROAD  
ROADWAY AND STREAM PLAN

SECTION 13, TOWNSHIP 40 SOUTH, RANGE 58 EAST, COPPER RIVER MERIDIAN, ALASKA

Drawing Number:

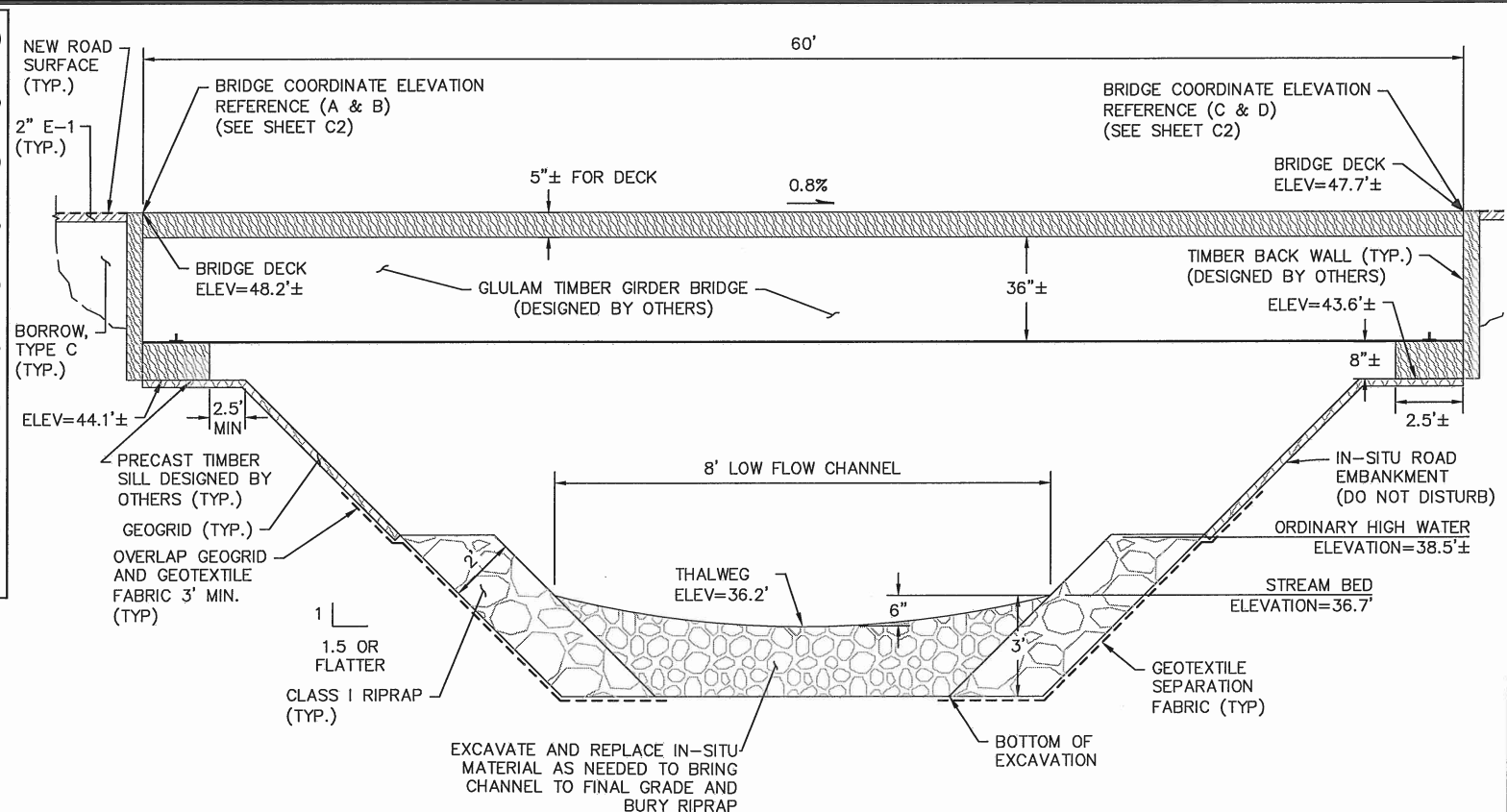
Sheet C2 of C4



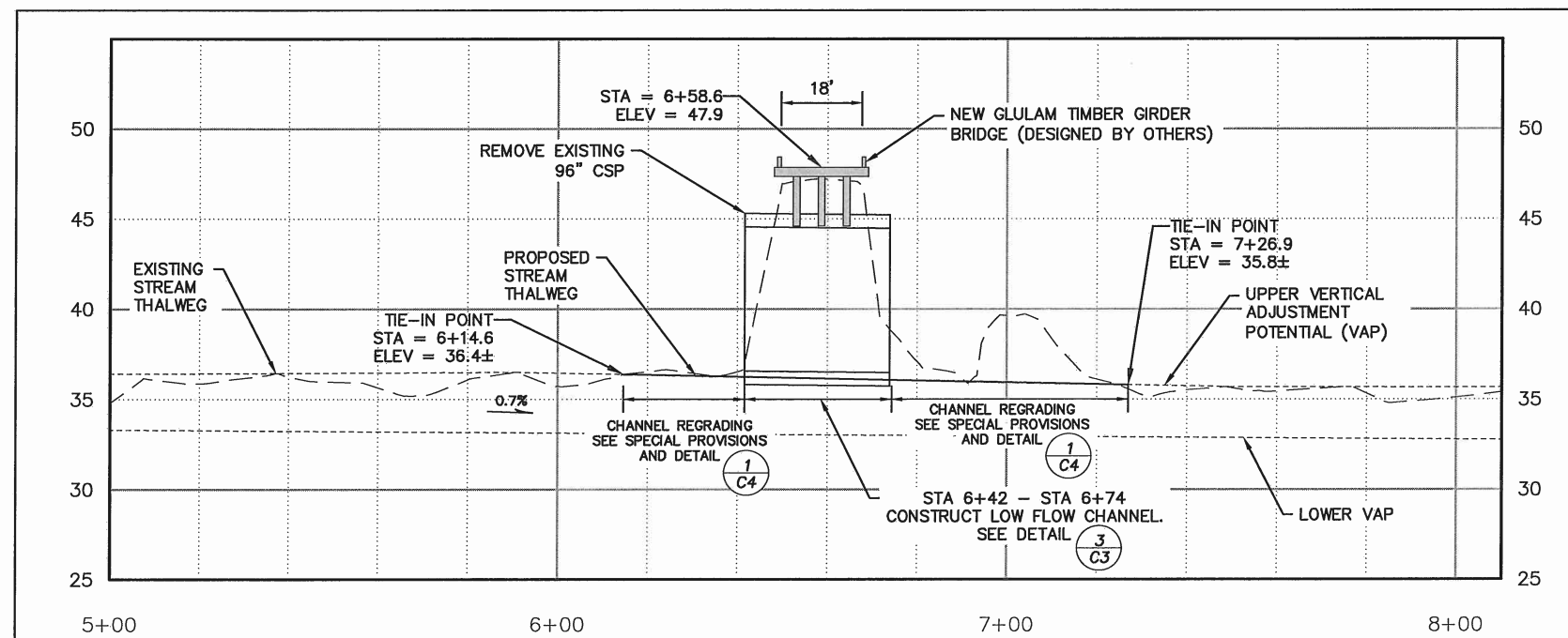
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C3  
ROADWAY PROFILE  
NTS

GENERAL NOTES:

- EXCAVATE STREAM CHANNEL TO GRADE AND DIMENSIONS SHOWN ON PLANS. LEAVE IN-SITU MATERIAL IN PLACE FOR STREAM BED.
- MAINTAIN 8-FOOT WIDE CHANNEL SECTION THROUGH EXTENT OF RECONSTRUCTED CHANNEL FROM APPROXIMATE STATION 6+15 TO 7+27.
- GRADE RIPRAP INTO EXISTING SLOPES MINIMIZING DISTURBANCE TO EXISTING VEGETATION.
- FILL SURFACE VOIDS OF PLACED RIPRAP WITH SALVAGED TOPSOIL OR LOCALLY OBTAINED SOIL RICH IN ORGANICS. SEED WITH 80% BLUEJOINT REEDGRASS, TRADENAME "ARCTIC MULCH" (CALAMAGROSTIS CANADENSIS) AND 20% ANNUAL RYEGRASS (LOLIUM PERENNE SSP. MULTIFLORUM).



3  
C3  
TYPICAL CHANNEL CROSS-SECTION AT CENTER OF ROAD  
NTS



2  
C3  
STREAM PROFILE  
NTS

| HYDRAULIC SUMMARY          |        |
|----------------------------|--------|
| EXCEEDENCE PROBABILITY     | Q(cfs) |
| Q2D2 (0.40x50%)            | 41     |
| 50%                        | 102    |
| 10%                        | 191    |
| 4%                         | 237    |
| 2%                         | 274    |
| 1%                         | 309    |
| DRAINAGE AREA = 0.86 SQ MI |        |

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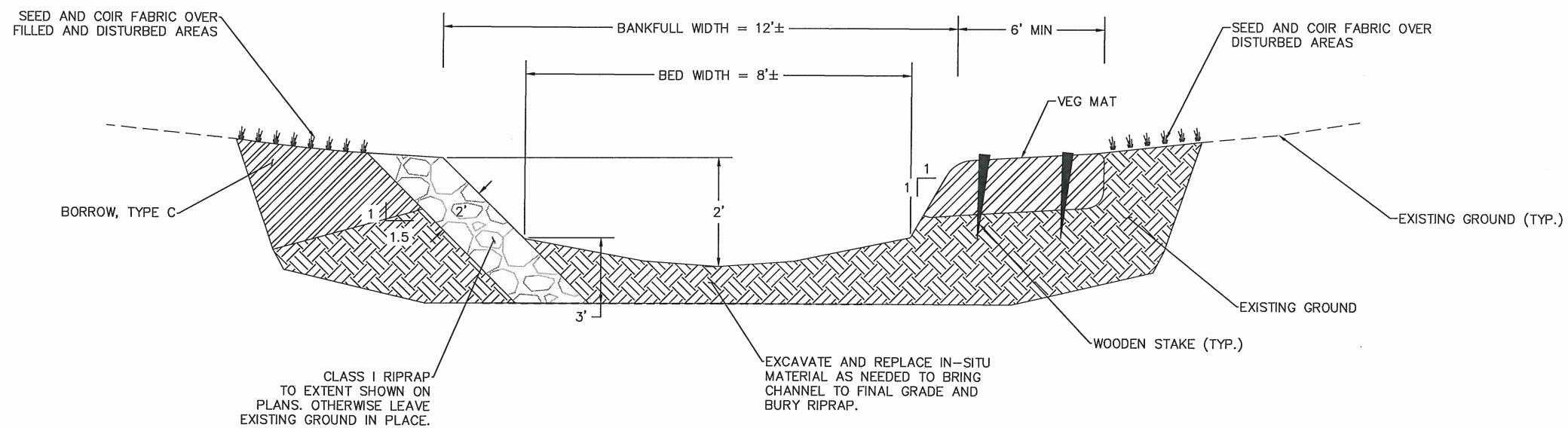


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PROFILES AND SECTIONS  
SECTION 13, TOWNSHIP 40 SOUTH, RANGE 58 EAST, COPPER RIVER MERIDIAN, ALASKA

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Sheet C3 of C4



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1  
C4  
NTS  
TYPICAL CHANNEL CROSS-SECTION CHANNEL REGRADING

- NOTES:
1. SALVAGE VEGETATIVE (VEG) MAT FROM AREA TO BE DISTURBED FOR EXCAVATION.
  2. VEG MAT TO BE MINIMUM OF 1' THICK.
  3. AFTER TRANSPLANTING VEG MAT TO PROPOSED BANKS, STAKE IN PLACE WITH WOODEN STAKES AT LEAST 2' LONG. PROVIDE ONE STAKE PER SQUARE YARD OF INSTALLED VEG MAT.
  4. APPROXIMATE AREA OF TRANSPLANTED VEG MAT IS 36 SQUARE YARDS.

| Revision No.    | Description | Date     | Designed        |
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Drawing Number:  
Sheet C4 of C4